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Perspective

COVID-19 Home Based Management in Poor Resources Settings: A Case of Rwanda

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Abstract

COVID-19 is an infectious disease and can be transmitted from humans to humans through infected air droplets during coughing and sneezing or though contact with contaminated hands or surfaces. By March 01st 2021, World Health Organization (WHO) reported 113,820,168 confirmed cases globally, among them 2,851,062 are from the continent of Africa. Rwanda reported 18,850 confirmed cases, and 261 deaths. Healthcare systems have been burdened by the huge number of COVID-19 cases. Home-Based Care (HBC) was introduced as an alternative option to control the pandemic specifically in poor resource countries. Since December 2020, the number of COVID-19 case and death continued to rise in Rwanda. To handle this issue, the government of Rwanda started promoting the home-based care for asymptomatic people or patients with mild symptoms and they would be followed up by trained Community Health Workers (CHW). The increased number of positive cases is attributed to inadequate compliance to COVID-19 Infectious Prevention and Control (IPC) measures, low socio-economic status, inability to self-isolate due to having small and shared living rooms, food insecurity, lack of familiarity to disinfection procedures for home sanitation, inadequate access to water, weak policy regulating HBC, insufficient PPEs for CHWs, CHW fear of getting infected through HBC, low level of community awareness and perception, comorbidities, poor communication during follow up of HBC patients. Overall, we concluded that HBC has been very crucial in management of COVID-19 as it relieved the burden on health facilities, but more improvement on HBC is needed to be properly applicable in poor resource settings.

Keywords: COVID-19-Home based care; Rwanda; COVID-19; Community health workers

Introduction

COVID-19 is an infectious disease and can be transmitted from humans to humans through infected air droplets during coughing and sneezing. It can also be through human contact with hands and surface that have the virus or touching the eyes, mouth, and nose with contaminated hands. According to the World Health Organization (By April 16th, 2021), there has been 138,688,383 confirmed cases globally with 2,978,935 deaths. Among those confirmed cases 2,851,062 are from the continent of Africa. Rwanda has 23,744 confirmed cases, 321 deaths [1].

In situation where there is increased number of COVID-19 cases and health system cannot handle them in healthcare facilities both in terms of infrastructure and human resources wisely, it is recommended that patients are cared for at home. In poor resources countries, healthcare systems have been burdened by the huge number of COVID-19 cases. The home-based care was introduced as an alternative or solution to deal with COVID-19 cases because of limited resources and capacities and the demand of healthcare services was bigger than the healthcare facilities capacity in most poor resources countries including Rwanda. WHO recommendation revealed that asymptomatic or patients with mild symptoms, or some who haven't tested positive but have come into contact with the individual who is positive to be taken care at home. Again, people without underlying conditions-that would increase the risk of developing complications [2].

However, home based care decision needs to be taken attentively with the initial assessment of the patient's safety and home environment. Ideally a healthcare provider assesses if the patient and family are able to comply with home care isolation, address safety and sanitation concerns and educate them about the required infection prevention and control measures at home, hygiene and social distancing measures. In addition to this, keep regular communication, monitoring and making follow ups throughout the home-based care period.

Rwanda Context

Since September 2020, Rwanda established the COVID-19 treatment centers. All the patients who tested positive initially would be treated at those centers until the cases soared and they started receiving severe cases only. From January 16,2021 and following the significant increase of COVID-19 cases, the Rwanda's Ministry of Health authorized all public health facilities to provide necessary medical care for the COVID-19 patients. Those facilities include the health centers, district hospitals, referral hospitals, and university teaching hospitals. Like other countries experienced, COVID-19 continued to rise in Rwanda. The government started promoting the home-based care for people with mild symptoms [3].

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The Rwanda Biomedical Center (RBC) released the Infection Prevention and Control (IPC) measures for the home isolation and care. Those include waste management, handling laundry separately, avoid sharing spaces, wearing masks, self-quarantine and hand hygiene and sanitation among others [4].

Based on the contribution of Community health Workers in improving healthcare seeking behavior, Rwanda government believe that community health workers would play a key role in raising community awareness on COVID-19 control and prevention measures as well as home based management of COVID-19 cases. CHWs are able to follow-up COVID-19 patients who are in their homes with their families in order to ensure that the families are complying with required measures and quarantine [5]. Moreover, CHWs are in charge of mobilizing the public and promote COVID-19 prevention measures such as regular hand washing, wearing facemasks, and physical distancing.

Provide health education on different topics such as symptoms of COVID-19, mode of transmission, prevention and control, building handwashing facilities at home, prevention of stigma for community members diagnosed with COVID-19. In addition to that CHWs have a responsibility to encourage people for seeking for medical care in case they present symptoms similar to COVID-19, or get tested if they are in contact with a COVID-19 patient. CHWs also have to monitor and address rumors and myths and answer to questions raised by the community members related to COVID-19. They monitor closely for alarming signs for COVID-19 patients in home based care and reinforce links between the community and health facilities. CHWs visit patients in home based care on daily basis and provide education to their family members about adequate isolation and prevention of cross contamination.

Challenge of home based care

Establishment and development of home based care approach for all covid19 patients who are asymptomatic and or presenting mild symptoms came as better solution for economic crisis concern within different nations especially in developing countries. This done regardless the lifestyles that community is living in and this might be the root cause of various challenges to implementer and the communities as well.

Since Sept 2020, Rwanda started suspending some isolation and treatment centers slow by slow to end up by decentralizing care and isolation of both cases and contacts to the community level. At the beginning, home based care would serve as the alternative option to control pandemic spread with limited resources. Keeping two meters' distance between family members, staying at home (all of the family members) and wearing the mask at home are still a challenge. For the home sanitation, people are not used to using gloves at home, and disinfectant, and this would be tricky to follow in case there is even the COVID-19 patient because it will take some time and attention to remember always.

Many Rwandan families have smaller houses depending on the family size- hence sharing the bedroom, laundry and bathroom is common. It is a big challenge to have separate room and materials for the COVID-19 patient who would be cared at home. There is a possibility that COVID-19 patient treated at home could infect other family members due to the inability to self-isolate and sharing home materials.

Wherever on the earth, income generation leads to social classes, and this socio-economic factor constitutes the main challenge to HBM. In Rwandan context, some people need to work for daily food (limited income without any saving), poor housing (insufficient bedroom according its occupants), water source far from home, people living alone and need to serve themselves for routine activities.

The gap is also found in the policy regulating HBC which allows the contact of COVID-19 patient admitted in HBC to move for their job, student to their school when if they don't present any COVID-19 symptom, in that case, they may spread infection when are they infected prior developing any symptom.

Additionally, community health workers who follow-up COVID-19 patients at the community level do not have enough protective equipments. The CHWs would be afraid of getting infection from the patient's homes. Stigma was one of the challenges that CHWs met while caring for patients in home based care. In addition to this they work as volunteers, hence, they also need to do other jobs in order to get money needed for daily life expenses.

Community awareness is still far, in Rwanda, some people still showing resistance to adhere to COVID-19 control measure set by the government including proper wearing of face mask every time out of the house, avoid social gathering and or drinking into bars, others believe there is no disease it's about politics: such community attitude is highly linked to HBC challenge because they are living with COVID-19 case but they leave home without complying with IPC measures which continue to spread infection locally between neighbors.

Some evidences show that elderly people and those with comorbidities or underlying conditions such as Hypertension, Diabetes, Cardiovascular diseases, Chronic respiratory diseases are considered as vulnerable group for COVID-19 and this were not put into consideration at the time of Home Based Care initiation, though the high percentage of COVID-19 victims belong to stated vulnerable group. Poor communication during follow up of HBC patients, contributes much to the increase in number of patients in critical condition as well as incremental deaths.

Conclusion

A large number of people especially in developing countries, surviving by casual works and they meet hard time when find themselves in restricted Home-Based Care where they have to be confined at home with no food. Eating healthy has been challenging also due to the existing food insecurity. In addition to this, some of the family members need to go out for working or shopping in order to get daily food. This is really a critical challenge in some countries with high number of patients where feeding them can't be achieved and it causes the movement of COVID-19 infected persons to look for food which leads to local transmission.

There is a big vacuum in complying with COVID-19 home-based care due to the food insecurity, poverty and limited space in household facilities. The recommended measures include taking healthy food every day with the variety of fruits and vegetables which

is expensive and sometimes unfordable to some patients. Most likely, people who tested positive and don't have symptoms will leave their homes to buy food or get money; however, they are controlled when given the tracking bracelet. In addition to this, the home isolation has been other challenges for the families that don't have enough bedrooms and house materials, and space.

There is a need for assessment of family/patient living conditions before considering the COVID-19 home-based management in poor resources settings- food availability, living with family or others who can be available to play a role of care giving during home-based care are the key aspects to consider. It is also important to check with the patients if they have resources and are willing to take needed measures after they are educated about home remedies and the consequences of not staying at home even if they have mild symptoms.

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